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DRAFT PROPOSAL FOR
GEOGRAPHIC PHOTO INTELLIGENCE MANUAL
FOR
THE CONTINENT OF AFRICA

Prepared By :

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PROPOSAL FOR GEOGRAPHIC PHOTO INTELLIGENCE MANUAL
FOR THE CONTINENT OF AFRICA

I. INTRODUCTION 25X1A5a1

[REDACTED] has recently completed a geographic photo intelligence
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manual for a large part of North Africa [REDACTED]
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[REDACTED] With the emergence of the entire African continent as an increasingly
significant area in global strategy and as a theatre of potential military instability, the
availability to intelligence agencies of accurate, comprehensive photo intelligence on
the area is of great importance. This proposal is for a Photo Intelligence Manual of
the African Continent - a continuation of the work previously accomplished which will
provide a complete training and reference manual of Africa for photo intelligence pur-
poses.

II. STATEMENT OF PURPOSE

We propose to perform research, compile, and provide one reproducible copy of a
Photo Intelligence Manual of Africa, including Madagascar, as outlined on the attached
map. The manual will be prepared to serve both as a training aid and as a manual for
operational reference. It will provide selected materials in such a form that photo inter-
preters and intelligence analysts with no previous knowledge of an area can rapidly and
accurately identify and understand the significance of features of that geographic area
which are of military importance.

III. BACKGROUND

The African continent presents a tremendously varied landscape ranging from tropical
to temperate physical and cultural environments. The physical features include sandy
wastes, lush jungles, upland plateaus cut by steep gorges, broad prairies, large areas
of swamp, and high, rugged mountain peaks. The cultural environment is exemplified

by an intermingling of European colonial and native African influences which dictate the characteristics of agriculture and urbanization. With this physical and cultural diversity, it becomes imperative that a study of the area provide interpreters and analysts with a clear understanding of the area's geographic features. This is all the more important in view of the rising nationalism in the area and its possible effects on the world military situation.

It is assumed that the photo analyst thoroughly understands and is familiar with the basic principles of object-image identification as determined by shape, size, shadow, tone, texture, pattern, and position or location. It is presumed that the analyst can classify object-images into broad categories, such as terrain surface, vegetation, man-made features, etc., and that associations or complexes of individual features can be recognized even though not all of the components of the association can be identified.

Even with extensive training and experience in basic photo interpretation, however, a photo analyst only rarely has enough knowledge of specific geographic areas to prepare meaningful and comprehensive area reports and evaluations. Not only are the visible characteristics of objects influenced by the geographic environment, but the environment itself produces many object-images which are unique to a particular area and which must be considered in a thorough understanding of the area's photo geography.

The proposed manual would provide a photo geographic synthesis, on a regional basis, of the bulk of textual material covering the area, directed specifically toward the military significance of the features of each region. This regional synthesis is paired with a carefully selected visual presentation consisting of annotated aerial photography (stereograms) with supporting oblique and ground photography. This dual

presentation is well integrated and directed to provide the analyst with meaningful clues which will enable him to rapidly obtain a picture of the military geography of the area and to effectively prepare general or specific photo intelligence reports, evaluations, or estimates.

IV. MATERIALS AVAILABLE FOR THE PROJECT

A large volume of documentary material exists in both government and private sources on Africa. This material, in addition to various intelligence reports and Defense Department publications, includes considerable work performed by universities under government contract, as well as an extensive coverage in open sources, such as the Library of Congress, various geographic societies, a large array of periodicals, and a fund of knowledge represented by qualified individuals who have lived and worked in various parts of the area. Much of the information in some sources is not applicable to the purpose of the manual; however, experience in area research has led to employment of rapid research procedures to extract and synthesize pertinent material.

Photographic coverage is suitable to provide a comprehensive treatment of the area. In some countries, available coverage is nearly 100%. In addition to U. S. Air Force and other United States sources, coverage obtained by the British Directorate of Overseas Surveys and the French Institut Geographique National is available and will be searched. **25X1A5a1** [redacted] has extensive holdings of excellent quality photography in Spanish Sahara, Liberia, Angola, Libya, Mozambique, and Union of South Africa. Of great significance is the fact that, **25X1A5a1**

[redacted] we have the opportunity

to obtain coverage of specific areas specially for this project.

V. PROCEDURES

A. Research

Research for the project will involve search, review, and analysis of data from aerial and ground photography, texts, maps, reports, and personal interviews with authorities on the area. Collection of photography will be handled by appropriate means, i.e., loan, requisition, or purchase.

The area will be divided into major divisions and subdivisions as appropriate. At present it is anticipated that there would be 60 to 75 major regional divisions in Africa. The criteria for delineation of the divisions will be based on gross image characteristics as exhibited by topography and cultural patterns, and will be established so as to provide a logical keying-by-location process of maximum benefit to the user.

B. Method of Presentation and General Outline

The method of presentation most effective in an area study is an all-inclusive treatment within each area division or subdivision. All the pertinent data about a specifically defined region is included under the heading of that region. Entry into the manual is by means of a series of location maps - one map delimiting the area divisions and a detailed map for each area division. Within the area divisions and subdivisions as applicable, text material, captioned aerial and ground photographs, sketches, and maps will be employed to present a comprehensive picture of natural and cultural features of military significance in the area. Emphasis will be on the aerial aspects; stereograms will be used wherever possible, supplemented by oblique and ground photography.

Within each area division or subdivision, each subject (physical features, agriculture, urban areas, transportation, etc.) will be analyzed in relation to its particular environment. For convenience and utility, subjects will be discussed under subheadings.

Discussion will include identification and description of natural and cultural features and associations of these features, together with the militarily significant conditions indicated by them. Process, function, and variations of identified items will be indicated.

Each area division and subdivision will include material under the following sub-headings, as appropriate. Order of presentation will be consistent throughout. Treatment of each topic will be aimed to give the analyst a clear understanding of the military intelligence aspects of each topic, as related to the geography of the region.

Location, size, boundaries, and significance of the area

Sub-heading: Physical Features

- Geology
- Topography
- Soils
- Vegetation
- Drainage
- Climate

Sub-heading: Agriculture

- Crops
- Field Patterns and Farm Characteristics
- Irrigation
- Agricultural Practices

Sub-heading: Urban Areas

- Characteristics, Types, Functional Components, Street Patterns
- Description of Dwellings, Commercial and Other Structures

Sub-heading: Industry

- Location and Structure of Installations
- Pattern and Layout
- Products and Processes

Sub-heading: Transportation

Railways
Roads
Inland Waterways
Ports

Sub-heading: Telecommunications

Radio Communication and Broadcasting
Telephone and Telegraph

Sub-heading: Military Installations

Airfields
Camps
Naval Bases
Fortifications and Field Works
Electronics Installations

C. Compilation

The material will be compiled in such a way as to be suitable for publication as a training and reference manual. Mock-up pages shall be prepared with carefully positioned stereograms, captions, annotations, and supporting text. Layouts will be with the objective of straight-forward but interesting presentation of material, and a certain degree of variety without confusion. Actual page formats can be designed to conform to most publication specifications without sacrificing effectiveness of presentation. An editing process will be performed to insure correctness of techniques, information, terminology, grammar, and format.

VI. SERVICES AND MATERIALS REQUIRED

A. In order to assure sufficient research facilities, it will be necessary that qualified personnel **25X1A5a1** be granted access to the following depositories of information:

USAF Documents Library (AFCIN 3D3)
USA Library (Pentagon Building)
Aeronautical Chart & Information Center, Detachment #1, PRSD
Dept. Navy, ONI Photo Files (H1) and Documents Library (M5)
Army Map Service

B. It is expected, based on experience in compiling the North Africa manual, that much valuable source material exists in foreign language books and periodicals. In order to utilize this material, research of foreign language (mainly French) documents, and translation of selected applicable material will be necessary.

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C. The drafting and photo lab facilities of [REDACTED] will be utilized as required for photo processing, layout, and mock-up of the manual.

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D. Photography obtained from government sources should be at no cost to [REDACTED]

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E. The services of a qualified organization will be secured to prepare from typed manuscript a reproduction of all text material suitable for final mock-up of the manual.

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VIII. MATERIAL TO BE DELIVERED

Item 1 Manuscript mock-up of approximately 60 to 75 regional divisions of the continent of Africa, except those areas of North Africa previously compiled, as shown on the attached map, in a form suitable for inspection and acceptance by the contracting agency.

Item 2 An index which will identify, by source and number, all photography used in the manual.

Item 3 A final mock-up of the manual suitable for photographic or lithographic reproduction.

Item 4 Periodic progress reports as desired by the contracting agency.

IX. SCHEDULE OF DELIVERY

Item 1 Complete delivery thirty (30) months from date of contract. Delivery of each regional division could be made as completed, on an area priority basis, beginning six (6) months from contract date.

Item 2 Thirty-six (36) months from date of contract.

Item 3 Thirty-six (36) months from date of contract. Partial deliveries on an area priority basis beginning ten (10) months from date of contract.

Item 4 As desired.

This schedule assumes that draft mock-ups (Item 1) of each division will be submitted for inspection and acceptance as compiled, and final mock-up prepared for each division as soon as the draft is approved. It is further assumed that no undue delays will be encountered in procurement of photography.

X. WARRANTY 25X1A5a1

warrants that no person or selling agency has been employed or retained to solicit or secure this contract upon an agreement or understanding for a commission, percentage, brokerage or contingency excepting bona fide employees or bona fide established commercial or selling agencies maintained by 25X1A5a1 for the purpose of securing business.

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AFRICA

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Area completed under
contracts

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